

ABSTRACT OF THE DISCLOSURE

A memory cell having a bit line contact is provided. The memory cell may be a $6F^2$ memory cell. The bit line contact may have a contact hole bounded by insulating
5 sidewalls, and the contact hole may be partially or completely filled with a doped polysilicon plug. The doped polysilicon plug may have an upper plug surface profile that is substantially free of concavities or substantially convex. Similarly, a storage node contact may comprise a doped polysilicon plug having an upper plug surface profile that is substantially free of concavities or that is substantially convex. Additionally, a
10 semiconductor device having a conductive contact comprising a polysilicon plug may be provided. The plug may contact a capacitor structure.